AUTHOR INDEX*

Anacker, R. L., 352

Balassa, G., 228
Bartnicki-García, S., 293
Bell, J. F., 341

Fukushi, K., 352

Gorini, L., 182

Haskins, W. T., 352
Hummeler, K., 381

Jenkin, C. R., 391

Kaplan, N. O., 155
Krause, R. M., 369
Kuyama, S., 282

Landy, M., 352
Larson, C. L., 341
List, R. H., 341

Malmgren, B., 352
Milner, K. C., 352
Munoz, J. J., 325

Nickerson, W. J., 305

Perkins, H. R., 18
Pramer, D., 282

Ribi, E., 341, 352
Rowley, D., 391

Schäfer, W., 1
Spector, W. G., 117
Springer, G. F., 191
Stadtman, E. R., 170
Starkey, R. L., 243

Wagner, R. R., 72
Watanabe, T., 87
Wentworth, B. B., 253
Wicht, W. C., 341
Williams, R. E. O., 56
Willoughby, D. A., 117
Wilson, P. W., 405
Wright, B., 273

* Cumulative author and subject indexes to volumes 23–26 were published in the December 1962 issue.

SUBJECT INDEX*

α-Acetolactate, formation in *Aerobacter aerogenes*, 170
Acids, *see* Amino, Deoxyribonucleic, Diaminopimelic, Muramic, Silicic, Tannic, Teichoic
Acridines, effect on drug resistance of cells, 87
Aerobacter aerogenes, glycol dehydrogenases of, 155
Agglutinogen of *Bordetella pertussis*, 325
Agglutinogens, on red-cell surfaces, 191
Agricultural experiment stations, establishment of, 405
Amino acids, in whole cell walls of gram-positive bacteria, 18
Amino acids, inhibition of aspartokinase activity by, 170
Anemias, hemolytic, resistance to, 191
Animal viruses, *see* Viruses, animal
Antibiotics, effect on cell-wall synthesis, 18
Antigen-antibody precipitation, inhibition of, 369
Antigens, erythrocyte surface, alteration of, 191
Antigens, soluble, of viruses, 381
Antigens, surface, from gram-negative bacteria, 352
Antigens of *Bordetella pertussis*, 325
Antigens of hemolytic streptococcal cell walls, 369
Arthrobotrys conoides, characteristics of, 282
Aspartate metabolism, in *Escherichia coli*, 170

Bacitracin A, inhibition of cell-wall synthesis by, 18
Bacteria, gram-positive, cell walls of, 18
Bacterial invasion, as cause of inflammation, 117
Bacteriophage propagation, techniques of, 253
Bacteriophage types, of staphylococci, 56
Bacteriophage types, reproducibility of, 253
Bacteriophage typing of staphylococci, 253
Balassa, Rozsi, work of, 228
Basement membrane, in vascular permeability, 117
Biochemical pathways, biological units of, 182
Bordetella pertussis, structure of, 325
Bordetella pertussis antigens, activities of, 325
Brucella, intracellular multiplication in mononuclear phagocytes, 391

Capillaries, ultrastructure of, 117
Carbohydrates, extraction from cell walls, 369
Cell-free systems, for study of mucopeptide biosynthesis, 18
Cell-wall synthesis, inhibition by antibiotics, 18
Cells walls, biosynthesis of, 18
Cell walls, chemical structure of, 18
Cell walls, isolation of, 18
Cell walls, micellar structure in, 352
Cell walls, yeast, fractionation of, 305
Cell walls of gram-positive organisms, 18
Cell walls of hemolytic streptococci, 369
Cell walls of *Mucor rouxii*, 293
Cellular immunity, 391
D-Cycloserine, *see* Oxamycin

Deoxyribonucleic acid, role in bacterial transformation, 228
Diaminopimelic acid, biosynthesis of, 18
Dictyostelium discoideum, life cycle of, 273
Dimorphism, biochemical bases of, 293
Drug resistance, multiple, biochemical mechanisms of, 87
Drug resistance, multiple, genetics of, 87

Electron microscopy of animal viruses, 381
Electron microscopy of capillary venules, 117
Encephalomyelitis, allergic, complete Freund's adjuvant in, 341
Endogenous reserves, utilization of, 273
Endotoxic O antigen, relationship to hapten, 352
Enzyme synthesis, repressors of, 182
Enzymes, effect on cell walls, 18
Enzymes, induced, effect on carbohydrate, 369
Enzymes, multiple forms of, 155, 170, 182
Enzymes, *see also* Esterase, Hexokinase, Phosphatase
Episomes, as resistance transfer factors, 87
Erythrocyte membrane, morphology of, 191
Erythrocyte surface antigens, alteration of, 191
Erythrocytes, enzymatic action on, 191
Escherichia coli, aspartokinases of, 170
Escherichia coli, multiple drug resistant, 87
Esterase, in maize, forms of, 155

Filtration pressure, effect on vascular permeability, 117
Fowl plague virus, reproduction of, 1
Fowl plague virus, structure of, 1
Fungi, morphogenesis in, 273, 282, 293, 305
Fungi, nematode-trapping, 282

Glutamate oxidation, in the slime mold, 273

Haemophilus, genetic transformation of, 228
Hapten, origin of, 352
Hapten, relationship to endotoxic O antigen, 352
Heat-stable and -labile toxins in *Bordetella pertussis*, 325
Hemagglutinin of *Bordetella pertussis*, 325

* Cumulative author and subject indexes to volumes 23–26 were published in the December 1962 issue.

Hemolytic streptococci, antigens of, 369
Herpes simplex virus, synthesis of, 381
Hexokinase, yeast, forms of, 155
Hexosamines, in yeast cell walls, 305
Histamine, ability to reproduce vascular changes of injury, 117
Histamine-sensitizing factor in *Bordetella pertussis*, 325
History of biological nitrogen fixation, 405
Host-reactive properties of mycobacteria, 341
Hypersensitivity due to bacilli, 341

Immunity, transfer with serum from immune animals, 391
Immunity to typhoid, 391
Infectious mononucleosis, enzymatic test for, 191
Inflammation, as a defense against bacteria, 117
Inflammatory response, 117
Influenza virus, structure of, 381
Interferon, effect on cellular resistance, 72
Interferon, endogenous production by cells, 72
Isocitric dehydrogenase, of yeast, 155

Lactic dehydrogenase, forms of, 155
Lactobacillus arabinosus, isolation of phosphate polymers from, 18
Leukocytes, emigration of, 117
Lipids, from yeast cell walls, 305
Lysates, sterilization and preservation of, 253
Lysozyme, effect on cell walls, 18

Macrophages, interaction with *Mycobacterium tuberculosis*, 391
Malic dehydrogenase, multiple forms of, 155
Maus-Elberfeld virus, reproduction of, 1
Maus-Elberfeld virus, structure of, 1
Metabolic pathways, enzymatic regulation of, 170
Metabolism, end-product regulation of, 170
Micellar structure in cell walls, 352
Microbiology, prospects for, 243
Micrococcus lysodeikticus, action of lysozyme on walls of, 18
Microorganisms, structure and immunological properties of, 325, 341, 352, 369, 381
Molecular sieving, 117
Mononucleosis, infectious, enzymatic test for, 191
Morphogenesis, atmospheric control of, 293
Mucopeptide, in walls of gram-positive organisms, 18
Mucor rouxii, mold-yeast dimorphism of, 293
Multiple drug resistance, *see* Drug resistance, multiple
Muramic acid, biosynthesis of, 18
Mutants, auxotrophic, transformation of, 228
Mutants, enzyme synthesis in, 182
Mycobacteria, host-reactive properties of, 341
Mycobacterium tuberculosis, interaction of macrophages with, 391

Nematode-trapping fungi, characteristics of, 282
Nemin, analysis of, 282
Newcastle disease virus, reproduction of, 1
Newcastle disease virus, structure of, 1
Nitrogen fixation, biological, history of, 405
Nitrogen fixation, by *Rhizobium*, 228
Novobiocin, inhibition of cell-wall synthesis by, 18

Oxamycin, inhibition of cell-wall synthesis by, 18

Park nucleotides, formation of, 18
Penicillin, inhibition of cell-wall synthesis by, 18
Peptides, effect on vascular permeability, 117
Periodate, effect on red cells, 191
Phage, *see* Bacteriophage
Phagocytes, mononuclear, from animals, 391
Phagocytic activity, in stimulated vascular endothelium, 117
Phosphatase, alkaline, in *Escherichia coli*, 155
Poliomyelitis virus, synthesis of, 381
Polysaccharide-protein complexes, from yeast cell walls, 305
Polysaccharides, adsorption by erythrocytes, 191
Polysaccharides, in walls of gram-positive bacteria, 18
Protective antigen in *Bordetella pertussis*, 325
Protein, from yeast cell walls, 305
Protein transport, 117
Proteins, adsorption by erythrocytes, 191
Proteins, in walls of gram-positive bacteria, 18
Psittacosis-lymphogranuloma organisms, relationship to bacteria, 18

R factors, origin of, 87
Resistance transfer factors, origin of, 87
Rhizobium, genetic transformation of, 228
Rhizobium, symbiosis with plants, 228
Rickettsiae, relationship to bacteria, 18

Salmonella infections in mice, 391
Salmonella typhimurium, resistance to, 391
Serotonin, effect on vascular permeability, 117
Shigellae, drug-resistant, 87
Silicic acid, hemolytic activity of, 191
Skin reactions to mycobacteria, 341
Slime mold, metabolism of, 273
Soluble antigens of viruses, 381
Staphylococci, bacteriophage typing of, 253
Staphylococci, coagulase-positive, phage types of, 56
Staphylococcus aureus, healthy carriage of, 56
Streptococcal cell walls, composition of, 369
Streptococcal variants, 369
Streptomycin, transformation of resistance to, 228
Surface-active compounds, action on erythrocytes, 191

Tannic acid, effect on red cells, 191

Teichoic acids, in cell walls of gram-positive bacteria, 18
Threonine deaminases, synthesis in *Escherichia coli*, 170
Tobacco mosaic virus, comparison with animal viruses, 1
Transformation, genetic, of *Rhizobium*, 228
Tubercle bacilli, immunity to, 341
Typhoid, immunity to, 391

Ultrasound, use in bacterial transformation, 228
Uridine nucleotides, in gram-negative bacteria, 18

Vaccines, killed, immunization of mice with, 391
Vancomycin, inhibition of cell-wall synthesis by, 18
Vascularity permeability, effect of inflammation on, 117
Venules, ultrastructure of, 117
Viral components, significance of, 1
Viral infection, cellular resistance to, 72
Viral interference, in mixed infections, 72
Virus, fowl plague, 1
Virus, herpes simplex, synthesis of, 381
Virus, influenza, structure of, 381
Virus, Maus-Elberfeld, 1
Virus, Newcastle disease, 1
Virus, poliomyelitis, synthesis of, 381
Virus receptors, action of enzymes on, 191
Viruses, animal, immunological properties of, 381
Viruses, animal, reproduction of, 1
Viruses, animal, structure of, 1, 381
Viruses, ribonucleic acid-containing, 1

Yeast hexokinase, forms of, 155
Yeasts, mechanism of budding in, 305
Yeasts, molecular bases of form in, 305